

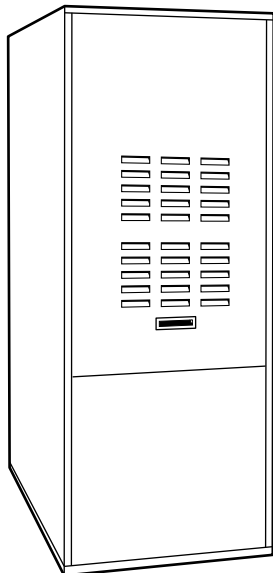


Heating & Cooling Systems

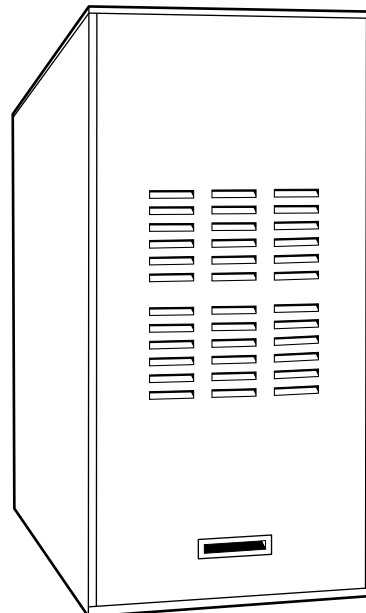
# OIL-FIRED FURNACES

# 361AAN, 362AAN & 363AAP

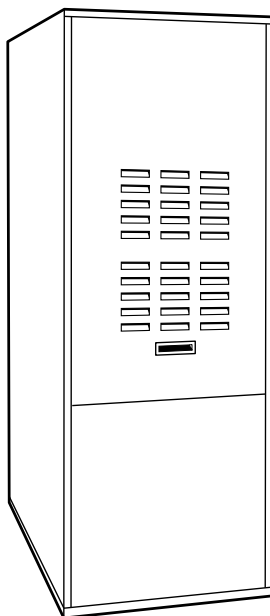
Sizes 075 thru 210



**361AAN**  
Upflow/Horizontal

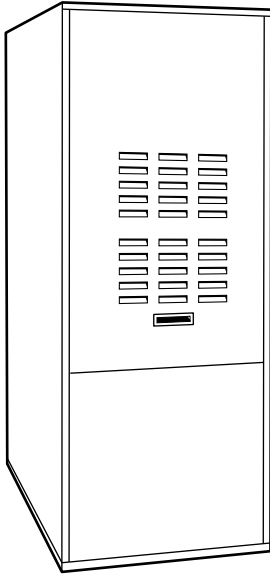


**362AAN**  
Low-Boy



**363AAP**  
Upflow/Horizontal  
(Large Capacity)

## MODEL 361AAN UPFLOW-HORIZONTAL OIL FURNACE



A93211

The 361AAN Furnace is designed for top performance to provide years of reliable, comfortable home heating.

The 361AAN is an upflow/horizontal oil furnace that can be installed upflow, horizontal right, or horizontal left for greater application coverage. The flue exits the front of the furnace. The heat exchanger is backed by a Limited Lifetime Warranty.

### FEATURES

**INSTALLATION FLEXIBILITY**—The 361AAN installs in upflow, horizontal right, or horizontal left positions for greater application coverage and installation flexibility.

**HEAT EXCHANGER**—The stainless steel primary and aluminized steel secondary heat exchangers are designed for outstanding reliability backed by a Limited Lifetime Warranty. The heat exchanger utilizes crimped seams instead of welds for corrosion resistance. All internal surfaces are accessible for any field maintenance without removing the heat exchanger.

**CLEANOUT PORTS**—Allow easy cleaning of secondary heat exchanger tubes without disassembly of the furnace or heat exchanger.

**CONTROLS**—The Beckett oil burner is equipped with an electronic primary relay for added reliability. Integrated fan timer control board with low-voltage terminal strip and 40-va transformer make air conditioning installation easy.

**HEAVY DUTY BLOWER**—Blower motors are PSC type and 3 speed. The direct-drive blowers eliminate belt adjustments in the field. The constant low-speed blower switch provides air circulation during “off” cycles for indoor air filtration.

**DURABLE CABINET**—The casing is constructed of prepainted steel for years of attractiveness. Filter and filter rack are provided with each furnace.

## SPECIFICATIONS

UNIT SIZE	036075	036105	048125	060155
<b>RATINGS AND PERFORMANCE</b>				
Firing Rate	0.50	0.76	0.90	1.12
Input (Btuh)	72,000	105,000	125,000	154,000
Heating Capacity (Btuh)*	55,000	85,000	100,000	125,000
AFUE %* ICS	80.0	80.7	81.5	80.3
Oil Pump Stages	1			
Heating Temperature Rise °F	55—85			
Recommended Heating Blower Speed	Low	Medium	Medium	High
Cooling CFM @ 0.5-in. wc Static Pressure	1255	1365	1745	1935
Heating CFM @ 0.2-in. wc Static Pressure	850	1425	1645	2170
<b>ELECTRICAL</b>				
Unit Volts—Hertz—Phase	115—60—1			
Operating Voltage Range†	104—127			
Rated Load Amps	12.55	12.55	15.65	16.15
Minimum Ampacity for Wire Sizing	14	14	18	19
Minimum Wire Size AWG	14	14	12	12
Maximum Wire Length (Ft)‡	26	26	32	30
Maximum Fuse Size (Amps)**	15	15	20	20
Control Transformer (24v)	40va			
External Control Power Available	Heating	35va		
	Cooling	35va		
Burner Model (3450 RPM)	Beckett AFG			
<b>BLOWER DATA</b>				
Motor HP	1/3	1/3	1/2	3/4
Blower Wheel Size (In.)	10 x 9	10 x 9	12 x 9	12 x 12
Blower Motor Speed and Type	1075 PSC Direct			
Filter Quantity and Size	(1) 20-1/8 x 25 x 1		(1) 20-1/8 x 30 x 1	

\* Capacity and AFUE in accordance with U.S. Government DOE test procedures.

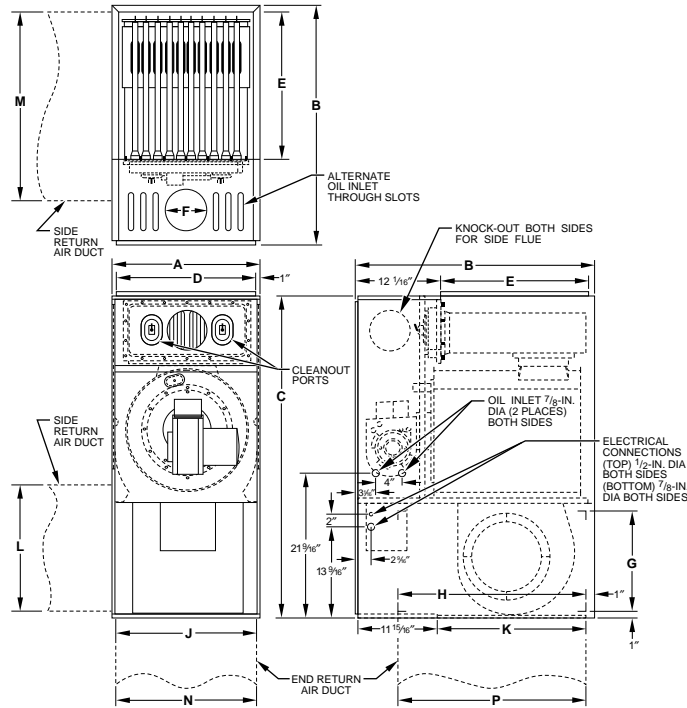
† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Length shown is measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.

\*\* Time-delay fuse is recommended.

ICS—Isolated Combustion System

## DIMENSIONS—MODEL 361AAN



A96306

### DIMENSIONS (In.)

UNIT SIZE	SHIP. WT (Lb)	UNIT DIMENSIONS			DUCT SUPPLY OPENING		FLUE DIAMETER	SIDE RETURN OPENING*		END (BOTTOM) RETURN OPENING		SIDE RETURN DUCT SIZE†		END (BOTTOM) RETURN DUCT SIZE†	
		WIDTH A	DEPTH B	HEIGHT C	D	E	F	G	H	J	K	L	M	N	P
036075	215	22	30-1/2	48	20	17	6‡	15	25-1/4	20-1/8	17-1/16	18-1/4	25-1/4	20-1/4	25-1/4
036105	228	22	30-1/2	48	20	17	6‡	15	25-1/4	20-1/8	17-1/16	18-1/4	25-1/4	20-1/4	25-1/4
048125	254	22	35-1/2	48	20	22	6‡	15	30-1/4	20-1/8	22-1/16	18-1/4	30-1/4	20-1/4	30-1/4
060155	265	22	35-1/2	48	20	22	6	15	30-1/4	20-1/8	22-1/16	18-1/4	30-1/4	20-1/4	30-1/4

\* Filter rack provides transition from duct size to opening size.

† Duct sizes are ID dimensions for slipping over filter rack.

‡ Outlet of heat exchanger and elbow shipped with furnace is 6 in. Flue pipe may be reduced to 5-in. diameter for vent sizing.

### MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS (In.)

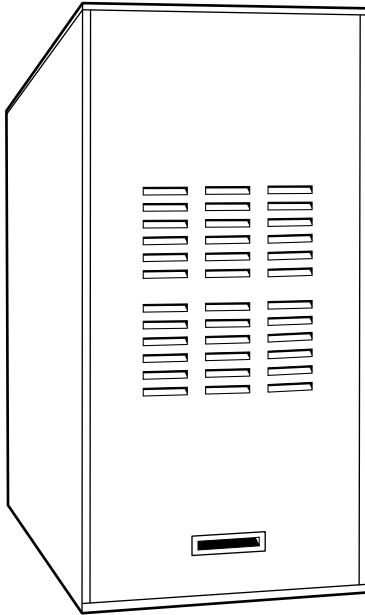
UNIT APPLICATION	UPFLOW	HORIZONTAL
SIDES—Furnace	0	2
Supply Plenum and Warm-Air Duct Within 6 ft of Furnace	1	1
BACK	0	0
TOP—Furnace Casing or Plenum	2	2
Horizontal Warm-Air Duct Within 6 ft of Furnace	2	3
BOTTOM	0*	0*
FLUE PIPE—Horizontally or Below Pipe	4	4
Vertically Above Pipe	8	8
FRONT	8	24

\* Floor may be combustible.

### AIR DELIVERY—CFM (Without Filters)

UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE IN. WC									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
036075	1/3 PSC	High	1530	1475	1410	1340	1255	1170	1075	970	855	705
		Medium	1240	1200	1150	1110	1065	1000	920	830	705	555
		Low	870	850	830	805	765	720	660	590	480	360
036105	1/3 PSC	High	1635	1560	1500	1425	1365	1260	1165	1040	945	785
		Medium	1470	1425	1365	1290	1220	1140	1030	935	825	695
		Low	1280	1245	1205	1145	1085	1010	935	835	710	590
048125	1/2 PSC	High	1965	1915	1865	1805	1745	1665	1590	1515	1445	1345
		Medium	1695	1645	1615	1565	1530	1465	1410	1335	1255	1165
		Low	1340	1330	1320	1290	1270	1215	1180	1125	1045	990
060155	3/4 PSC	High	2240	2170	2085	1980	1935	1820	1750	1665	1590	1510
		Medium	2000	1965	1890	1795	1755	1690	1625	1555	1480	1375
		Low	1535	1495	1450	1420	1365	1330	1275	1205	1125	1035

## MODEL 362AAN LOW-BOY OIL FURNACE



A96358

The 362AAN Furnace is designed for top performance to provide years of reliable, comfortable home heating.

The 362AAN is a Low-Boy style oil furnace that can be installed in limited overhead areas for greater application coverage. The heat exchanger is backed by a Limited Lifetime Warranty.

### FEATURES

**LOW-BOY CABINET STYLE**—The 362AAN allows easy installation in low overhead areas such as crawlspaces and sub-basements.

**HEAT EXCHANGER**—The stainless steel primary and aluminized steel secondary heat exchangers are designed for outstanding reliability backed by a Limited Lifetime Warranty. The heat exchanger utilizes crimped seams instead of welds for corrosion resistance. All internal surfaces are accessible for any field maintenance without removing the heat exchanger.

**CLEANOUT PORTS**—Allow easy cleaning of secondary heat exchanger tubes without disassembly of the furnace or heat exchanger.

**CONTROLS**—The Beckett oil burner is equipped with an electronic primary relay for added reliability. Integrated fan timer control board with low-voltage terminal strip and 40-va transformer make air conditioning installation easy.

**HEAVY DUTY BLOWER**—Blower motors are PSC type and 3 speed. The direct-drive blowers eliminate belt adjustments in the field. The constant low-speed blower switch provides air circulation during “off” cycles for indoor air filtration.

**DURABLE CABINET**—The casing is constructed of prepainted steel for years of attractiveness. Filter provided with each furnace.

UNIT SIZE	036105	048125	060155
<b>RATINGS AND PERFORMANCE</b>			
Firing Rate	0.76	0.90	1.12
Input (Btuh)	105,000	125,000	154,000
Heating Capacity (Btuh)*	85,000	100,000	125,000
AFUE %* ICS	80.3	82.5	81.0
Oil Pump Stages	1		
Heating Temperature Rise °F	55—85		
Recommended Heating Blower Speed	Medium	Medium	High
Cooling CFM @ 0.5-in. wc Static Pressure	1550	1630	1800
Heating CFM @ 0.2-in. wc Static Pressure	1335	1675	1960
<b>ELECTRICAL</b>			
Unit Volts—Hertz—Phase	115—60—1		
Operating Voltage Range†	104—127		
Rated Load Amps	12.55	15.65	16.15
Minimum Ampacity for Wire Sizing	14	18	19
Minimum Wire Size AWG	14	12	12
Maximum Wire Length (Ft)‡	26	32	30
Maximum Fuse Size (Amps)**	15	20	20
Control Transformer (24v)	40va		
External Control Power Available Heating	35va		
Cooling	35va		
Burner Model (3450 RPM)	Beckett AFG		
<b>BLOWER DATA</b>			
Motor HP	1/3	1/2	3/4
Blower Wheel Size (In.)	12 x 9	12 x 9	12 x 12
Blower Motor Speed and Type	1075 PSC Direct		
Filter Quantity and Size	(1) 21-1/4 x 21-1/4 x 1		

\* Capacity and AFUE in accordance with U.S. Government DOE test procedures.

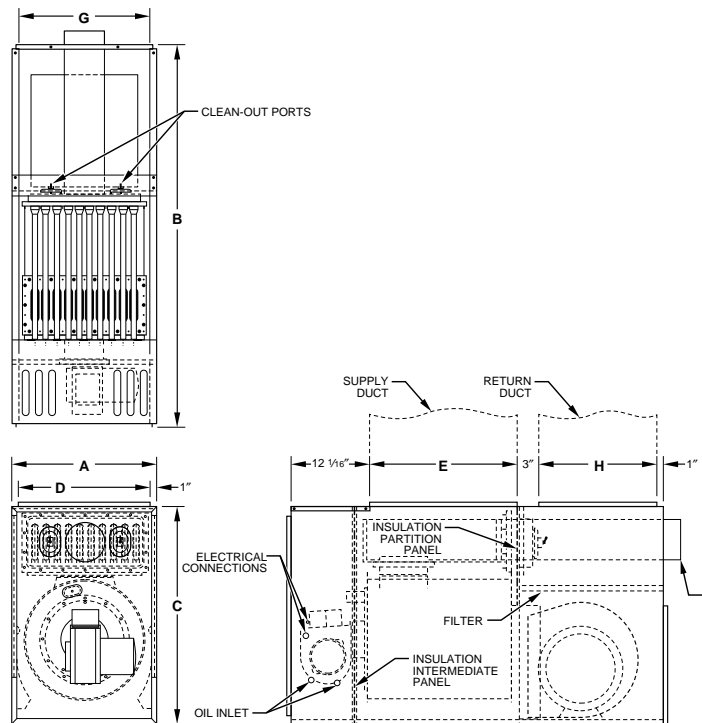
† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Length shown is measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.

\*\* Time-delay fuse is recommended.

ICS—Isolated Combustion System

## DIMENSIONS—MODEL 362AAN



A96309

### DIMENSIONS (In.)

UNIT SIZE	SHIP. WT (Lb)	UNIT DIMENSIONS			DUCT SUPPLY OPENING		FLUE DIAMETER	RETURN DUCT	
		WIDTH	DEPTH	HEIGHT	D	E	F	G	H
		A	B	C					
036105	248	22	52	33	20	17-1/4	6*	20	18
048125	269	22	57	33	20	22-1/4	6*	20	18
060155	278	22	57	33	20	22-1/4	6	20	18

\*Flue pipe may be reduced to 5-in. diameter on 105 and 125 sizes for vent sizing.

### MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS (In.)

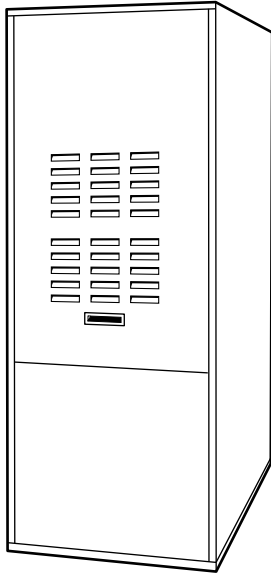
UNIT APPLICATION	LOW-BOY
SIDES—Furnace	0
Supply Plenum and Warm-Air Duct Within 6 ft of Furnace	1
BACK	0
TOP—Furnace Casing or Plenum	2
Horizontal Warm-Air Duct Within 6 ft of Furnace	2
BOTTOM	0*
FLUE PIPE—Horizontally or Below Pipe	4
Vertically Above Pipe	8
FRONT	8

\* Floor may be combustible.

### AIR DELIVERY—CFM (Without Filters)

UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE IN. WC									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
036105	1/3 PSC	High	1795	1735	1675	1605	1550	1485	1425	1350	1275	1220
		Medium	1365	1335	1305	1275	1255	1215	1155	1105	1050	985
		Low	995	965	945	925	900	870	825	775	725	670
048125	1/2 PSC	High	1905	1845	1770	1695	1630	1565	1490	1425	1325	1220
		Medium	1750	1675	1620	1560	1500	1440	1370	1305	1235	1130
		Low	1390	1350	1305	1260	1220	1180	1120	1060	985	880
060155	3/4 PSC	High	2025	1960	1905	1850	1800	1655	1575	1500	1415	1315
		Medium	1885	1825	1760	1705	1640	1565	1500	1430	1350	1265
		Low	1555	1490	1445	1410	1350	1280	1230	1155	1085	1005

## MODEL 363AAP UPFLOW/HORIZONTAL OIL FURNACE



A93213

The 363AAP Furnace is designed for top performance to provide years of reliable, comfortable home heating. This furnace is also designed to meet the need for large residential and light commercial markets.

The 363AAP is a large capacity upflow/horizontal oil furnace that can be installed upflow, horizontal right, or horizontal left for greater application coverage. The flue exits the rear of the furnace. The heat exchanger is backed by a Limited Lifetime Warranty.

### FEATURES

**INSTALLATION FLEXIBILITY**—The 363AAP installs in either upflow, horizontal right, or horizontal left orientation for greater application coverage and installation flexibility.

**HEAT EXCHANGER**—The stainless steel primary and aluminized steel secondary heat exchangers are designed for outstanding reliability backed by a Limited Lifetime Warranty. The heat exchanger utilizes crimped seams instead of welds for corrosion resistance. All internal surfaces are accessible for any field maintenance without removing the heat exchanger.

**CONTROLS**—The Beckett oil burner is equipped with an electronic primary relay for added reliability. Integrated fan timer control board with low-voltage terminal strip and 40-va transformer make air conditioning installation easy.

**HEAVY DUTY BLOWER**—Blower motors are PSC type and 3 speed. The direct-drive blowers eliminate belt adjustments in the field. The constant low-speed blower switch provides air circulation during “off” cycles for indoor air filtration.

**DURABLE CABINET**—The casing is constructed of prepainted steel for years of attractiveness. Filter and frame are provided with each furnace.

UNIT SIZE		060210
<b>RATINGS AND PERFORMANCE</b>		
Firing Rate		1.50
Input (Btuh)		210,000
Heating Capacity (Btuh)*		170,000
AFUE %*	ICS	81.2
Oil Pump Stages		2
Heating Temp Rise °F		70—100
Recommended Heating Blower Speed		Medium
Cooling CFM @ 0.5-in. wc Static Pressure		2145
Heating CFM @ 0.2-in. wc Static Pressure		2125
<b>ELECTRICAL</b>		
Unit Volts—Hertz—Phase		115—60—1
Operating Voltage Range†		104—127
Rated Load Amps		16.15
Minimum Ampacity for Wire Sizing		19
Minimum Wire Size AWG		12
Maximum Wire Length (Ft)‡		30
Maximum Fuse Size (Amps)**		20
Control Transformer (24v)		40va
External Control Power Available	Heating	35va
	Cooling	35va
Burner Model (3450 RPM)		Beckett AFG
<b>BLOWER DATA</b>		
Motor HP		3/4
Blower Wheel Size (In.)		12 x 12
Blower Motor Speed and Type		1075 PSC Direct
Filter Quantity and Size		(1) 24-1/2 x 38-1/4 x 1

\* Capacity and AFUE in accordance with U.S. Government DOE test procedures.

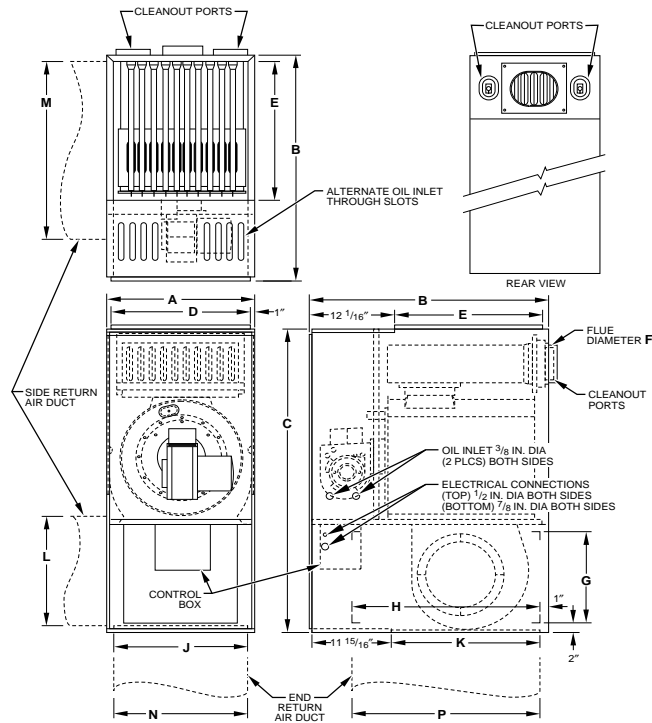
† Permissible limits of the voltage range at which the unit will operate satisfactorily.

‡ Length shown is measured 1 way along wire path between unit and service panel for maximum 2% voltage drop.

\*\* Time-delay fuse is recommended.

ICS—Isolated Combustion System

## DIMENSIONS—MODEL 363AAP



A96336

### DIMENSIONS (In.)

UNIT SIZE	SHIP WT (Lb)	UNIT DIMENSIONS			DUCT SUPPLY OPENING		FLUE DIAMETER F	SIDE RETURN OPENING*		END (BOTTOM) RETURN OPENING		SIDE RETURN DUCT SIZE†		END (BOTTOM) RETURN DUCT SIZE†	
		WIDTH A	DEPTH B	HEIGHT C	D	E		G	H	J	K	L	M	N	P
		060210	385	26	42-1/2	54-3/4	24	29	7	17-3/4	37-1/4	24-1/8	29-1/16	20-1/4	38-1/4

\*Filter rack provides transition from duct to opening size.  
 † Duct sizes are ID dimensions for slipping over filter rack.

### MINIMUM CLEARANCES TO COMBUSTIBLE MATERIALS (In.)

UNIT APPLICATION	UPFLOW	HORIZONTAL
SIDES—Furnace	2	2
Supply Plenum and Warm-Air Duct Within 6 ft of Furnace	1	1
BACK	2	2
TOP—Furnace Casing or Plenum	2	2
Horizontal Warm-Air Duct Within 6 ft of Furnace	2	3
BOTTOM	0*	0*
FLUE PIPE—Horizontally or Below Pipe	9	9
Vertically Above Pipe	9	9
FRONT	24	24

\* Floor may be combustible.

### AIR DELIVERY—CFM (Without Filters)

UNIT SIZE	BLOWER MOTOR HP	SPEED	EXTERNAL STATIC PRESSURE IN. WC									
			0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
060210	3/4 PSC	High	2485	2395	2305	2250	2145	2075	1975	1885	1780	1675
		Medium	2195	2125	2060	1990	1915	1860	1785	1700	1620	1525
		Low	1640	1590	1540	1515	1460	1410	1350	1275	1190	1075

# SERVICE TRAINING

**Packaged Service Training** programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

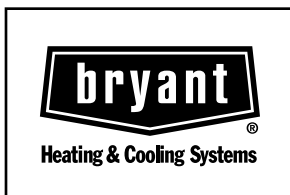
**Classroom Service Training** plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

**CALL FOR FREE CATALOG 1-800-962-9212**

Packaged Service Training

Classroom Service Training

A94328



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE  
WITH INSTALLATION INSTRUCTIONS

Cancels: PDS 361A.75.1B